

Appl. No. 09/759,552
Atty. Docket No. 8394
Amdt. dated July 21, 2009
Reply to Office Action of March 17, 2009
Customer No. 27752

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An electrostatic spraying device structured to deliver a product from a reservoir through a channel to a point of dispersal, to electrostatically charge the product via a high power electrode after the product has exited the reservoir and to dispense the product from an exit orifice of a nozzle to the skin of a user, wherein said device comprises:

a power source to supply an electrical charge; [[and]]

a high voltage power supply electrically connected to said power source to charge the high voltage electrode and to supply a variable output signal in response to a feedback signal; and

a high voltage resistor with a resistance value “R” in ohms “ Ω ”, electrically connected to an output of the high voltage power supply where “R” is in the range of 1M Ω and 100 G Ω which has a capacitance “pF”, wherein the resistor drains the capacitance of the high voltage power supply in less than about 60 seconds and R is less than or equal to 60/pF.

2. (Original) The electrostatic spraying device of Claim 1, wherein said feedback signal monitors a voltage level at said high voltage electrode.

3 (Original) The electrostatic spraying device of Claim 1, wherein said feedback signal monitors a voltage level within said high voltage power supply.

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4. (Original) The electrostatic spraying device of Claim 3, wherein said feedback signal monitors a voltage level at a primary coil of a high voltage transformer.

5. (Original) The electrostatic spraying device of Claim 3, wherein said feedback signal monitors a voltage level at a storage capacitor within said high voltage power supply.

6. (Original) The electrostatic spraying device of Claim 1, wherein said high voltage power supply alters a current level supplied through said high voltage power supply in response to said feedback signal.

7. (Original) The electrostatic spraying device of Claim 1, wherein said high voltage power supply varies said output by varying a frequency of a control signal of a DC/DC converter of said high voltage power supply.

8. - 9. (Canceled)

10. (Original) The electrostatic spraying device of Claim 1, wherein said high voltage power supply adjusts said output signal of said high voltage power supply in response to a change in a flow rate of the product.

11. (Original) The electrostatic spraying device of Claim 1, wherein said high voltage power supply is encased in a sealant.

12. (Original) The electrostatic spraying device of Claim 1, further comprising a moisture-proof barrier for sealing the device.

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13. (Canceled)

14. (Withdrawn) The electrostatic spraying device of Claim 13, wherein said high voltage resistor has a resistance selected such that said resistor is capable to drain said stored charge of the high voltage power supply in less than about 20 seconds after said high voltage power supply is deactivated.

15. (Withdrawn) The electrostatic spraying device of Claim 1, further comprising a high voltage resistor electrically connected to the said high voltage electrode to drain a stored charge of the high voltage power supply.

16. (Withdrawn) The electrostatic spraying device of Claim 1, further comprising a mechanical switch configured to drain a stored charge of the high voltage power supply when said high voltage power supply is deactivated.

17. (Withdrawn) The electrostatic spraying device of Claim 1, further comprising an electrical mechanical switch configured to drain a stored charge of the high voltage power supply when said high voltage power supply is deactivated.

18. (Currently Amended) An electrostatic spraying device structured to deliver a product from a reservoir through a channel to a point of dispersal, to electrostatically charge the product via a high power electrode after the product has exited the reservoir and to dispense the product from an exit orifice of a nozzle to the skin of a user, wherein said device comprises:

a power source to supply an electrical charge; [[and]]

a high voltage power supply electrically connected to said power source to charge the high voltage electrode and to supply a variable output signal in response to a feedback signal; and

a high voltage resistor with a resistance value “R” in ohms “ Ω ”, electrically connected to an output of the high voltage power supply where “R” is in the range of 500M Ω and 50 G Ω which has a capacitance “pF”, wherein the resistor drains the

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~~capacitance of the high voltage power supply in less than about 30 seconds and R is less than or equal to 30/pF.~~

19. (Currently Amended) An electrostatic spraying device structured to deliver a product from a reservoir through a channel to a point of dispersal, to electrostatically charge the product via a high power electrode after the product has exited the reservoir and to dispense the product from an exit orifice of a nozzle to the skin of a user, wherein said device comprises:

a power source to supply an electrical charge; [[and]]

a high voltage power supply electrically connected to said power source to charge the high voltage electrode and to supply a variable output signal in response to a feedback signal; and

a high voltage resistor with a resistance value “R” in ohms “ Ω ”, electrically connected to an output of the high voltage power supply where “R” is in the range of 1 G Ω and 20 G Ω which has a capacitance “pF”, wherein the resistor drains the capacitance of the high voltage power supply in less than about 5 seconds and R is less than or equal to 5/pF.